

Clinic Generator Computer Model for Planning Cities Readiness Initiative Medication Clinics

Imagine this. You're an epidemiologist by training, new to public health. You've been in your job less than a year, and your boss hands you an assignment: plan a response to a bioterrorist attack that requires dispensing medications to a population of over 120,000 within 48 hours—with a staff of 3.

Welcome to Russell Melmed's world. Melmed serves the Ledge Light Health District, a local health department comprised of five towns in southeastern Connecticut—New London, Groton, Ledyard, East Lyme, and Waterford.

"I'm an epidemiologist, not an emergency planner," Melmed said. "We don't have a staff person who is specifically an emergency planner. We have a public health nurse and epidemiologist, with support from our deputy director of health—that's our emergency planning team."

Melmed went to NACCHO's APC website (apc.naccho.org) looking for help. There he found the perfect tool to meet his needs—the Clinic Generator computer model, developed by the Montgomery County, Maryland, APC in collaboration with the University of Maryland's School of Engineering.

The model allows users to conduct advance planning of mass dispensing clinics based on the size of the populations and the timeline for treatment. When the user enters variables such as desired through-put, process times, and walking distances, the model output provides details about staffing levels and clinic performance—including a breakdown of cycle times, average queue lengths, and station utilization.

"If I had all the time in the world, I could have created something like this myself," Melmed said. "But none of us have enough time to do all we need to do. APCs can help a lot."

Melmed first learned about the APC program at the Public Health Preparedness Summit this past February. He reports that his first reaction was, "Wow these APCS are amazing!" He started exploring what the APC Program is all about.

Melmed found the Clinic Generator quite fortuitously, while browsing other APC tools. But the Montgomery APC tool gave him just the help he needed. "One thing the Clinic Generator told us was that our plans were unrealistic," he said. "Before I started using the tool, my estimated staffing numbers were ridiculous." But the Clinic Generator showed that to achieve his desired level of medications dispensed, he would have to increase the number of PODs as well as the number of people required to staff them.

"To shell out 150,000-plus doses of antibiotic, you need a lot of people," he said. "The model demonstrated what type of staff was needed and where they would fit into the overall POD plan." Melmed added that the tool's findings demonstrate the need for volunteers to staff the

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PODs. “It emphasizes the need to coordinate with volunteer organizations,” he said.

Melmed says he eventually plans to use the Clinic Generator to conduct drills on his mass dispensing plans, but they are not yet at that point. “Right now we’re just in the early stages of planning,” he said. But he recommends that other health districts use the Clinic Generator tool to develop their plans.

“Understanding what APCs can do and how they can help was a big step forward for us,” Melmed said. “We thought we were on our own. But APCs have done a lot of the groundwork for us. By creating these tools, there are parts of the plans that we don’t have to create.”

“If people aren’t using APC tools, they’re doing a lot of the groundwork themselves. And if you’re doing the groundwork yourself, you’re going to be challenged to do the best job that you can do with planning. There’s just so much to complete.”